



## U.S. FISH AND WILDLIFE SERVICE TRANSMITTAL SHEET

PART	SUBJECT	RELEASE NUMBER
713 FW 1-5	Fisheries Aquatic Animal Health Policy Overview Aquatic Animal Health Operations Exotic Aquatic Animal Disease Eradication Plan Aquatic Animal Health Assistance to Non- Service Entities Special Case Aquatic Animal Movements and Controlled Propagation Programs	433
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### EXPLANATION OF MATERIAL TRANSMITTED:

These chapters are the Service's Aquatic Animal Health Policy and serve as the basis for Service efforts to contain, control, and minimize the impacts of aquatic animal pathogens and diseases on Service-contracted properties (i.e., lands, waters, facilities, and Service-contracted hatcheries).

ACTING DIRECTOR

### FILING INSTRUCTIONS:

#### Remove:

713 FW 1, 02/15/95, FWM 170  
None  
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713 FW 2, 02/15/95, FWM 170  
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713 FW 1, 11/25/03, FWM 433  
Exhibit 1, 713 FW 1, 11/25/03, FWM 433  
Exhibit 2, 713 FW 1, 11/25/03, FWM 433  
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**Chapter 1 Aquatic Animal Health Policy Overview**

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**1.1 What is the purpose of this Part?** The chapters in this Part (713 FW 1-5) establish the Fish and Wildlife Service Aquatic Animal Health Policy and standards. These chapters and the Handbook of U.S. Fish and Wildlife Service Aquatic Animal Procedures and Protocols (Handbook) serve as the basis for our efforts to contain, control, and minimize the impacts of aquatic animal pathogens and diseases on Service-managed and Service-contracted properties (i.e., lands, waters, facilities, and Service-contracted hatcheries).

**1.2 What is the scope of this chapter and to whom does it apply?** This chapter covers all Service aquatic animal health operations, including managerial and technical responsibilities and applies to all Service personnel.

**1.3 What terms do I need to know?** Exhibit 1 defines terms that apply to the Aquatic Animal Health Policy.

**1.4 What is the Handbook of the U.S. Fish and Wildlife Service Aquatic Animal Procedures and Protocols?** The Handbook contains detailed procedures and standard protocols to help implement the Aquatic Animal Health Policy. The Aquatic Animal Health Policy Committee will review and revise the Handbook, as necessary, and the Assistant Director - Fisheries and Habitat Conservation will approve and issue all changes and revisions.

**1.5 What is the Service's general policy relative to aquatic animal health in the United States?**

**A.** Service aquatic animal health officials and fishery and facility managers will conduct aquatic animal activities in such a manner as to prevent the spread of aquatic animal pathogens into areas where they are not known to occur; eradicate, when feasible, certain serious aquatic animal pathogens; and use procedures as described in the Handbook for detecting, controlling, and minimizing the impact of aquatic animal pathogens that cannot be eradicated.

**B.** Service aquatic animal health officials will provide leadership, direction, and technical assistance to enable international agencies, foreign governments, Native American tribes, States, and the private sector to organize and carry out programs to maintain and manage aquatic animal health.

**C.** As identified by a Service Fish Health Center (FHC) Director, facility managers will culture and utilize healthy, high quality aquatic animals to meet Service fisheries objectives. Service aquatic animal health officials will inspect all Service aquatic animal facilities annually and all primary broodstock hatcheries twice annually, maintaining surveillance of all aquatic animals at all Service facilities for occurrences of pathogens and diseases, as outlined or referred to in this document and/or the Handbook. Service fishery managers will stock only aquatic animals not posing

a health threat to natural resources (e.g., undergoing an epizootic of a disease that would likely impact natural populations, etc.).

**D.** Service aquatic animal health officials may conduct applied research on aquatic animal diseases to: improve pathogen detection and disease diagnostic techniques; develop procedures for hygiene, therapy, and pathogen eradication; improve the disease resistance of cultured aquatic animals; and determine interrelationships of pathogen, host, and environment. If possible, conduct these studies in cooperation with other Federal, State, tribal, and private entities.

**E.** Service aquatic animal health officials will provide the results of aquatic animal health studies to State, tribal, and private sector cooperators and participate in international, national, and regional aquatic animal health cooperative agreements negotiated with States, tribal governments, and aquaculture associations.

**1.6 Who is responsible for implementing the Aquatic Animal Health Policy?**

**A.** The **Assistant Director - Fisheries and Habitat Conservation** via the Service Aquatic Animal Health Policy Committee is responsible for development and maintenance of all Service aquatic animal health policy and procedures and oversees Servicewide implementation of aquatic animal health policy and procedures.

**B.** **Regional Directors/Manager, California/Nevada Operations Office (CNO)** are responsible for compliance with the provisions of this policy (713 FW 1-5) and will:

**(1)** Ensure that health surveillance is completed on all aquatic animal lots prior to arrival, release, or transfer from Service and Service-contracted facilities (see Exhibit 1, 713 FW 2).

**(2)** Authorize the transfer of gametes, fertilized eggs, or aquatic animals to Service broodstock facilities.

**(3)** Authorize all operations conducted in the Region/CNO under the exotic disease eradication plan, including authorizing quarantines as required to contain suspected or confirmed outbreaks of exotic diseases (713 FW 3).

**(4)** Inform the Chief, Division of the National Fish Hatchery System of a downgrade in a facility's pathogen designation (sufficient to affect its management plan objectives). Provide written notification of such downgrade to the Director within 5 working days;

**(5)** Ensure that the Service FHC Director is informed of all proposed gamete, fertilized egg, or aquatic animal transfers to Service facilities within the Region/CNO at least 10

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working days prior to proposed movement (30 working days are required if additional fish health testing is needed).

(6) Resolve conflicts between this policy and other compacts, policies, agreements, guidelines, and/or contracts with other jurisdictional entities.

**C. Service FHC Directors will:**

(1) Provide and coordinate aquatic animal health surveillance services to all Service facilities.

(2) Conduct aquatic animal health services in accordance with established cooperative agreements.

(3) Complete Fish Health Inspection Reports (FWS Form 3-226), maintain the original Inspection Report as the sole archive location, provide copies of the Inspection Report to the inspected facility, and to other appropriate agencies.

(4) Maintain a master inspection record for each facility and aquatic animal stock inspected and immediately report by telephone, email, or fax any changes that result in a downgrade in the pathogen designation to the Regional Director/CNO Manager. In addition, immediately notify the Regional Director/CNO Manager and potentially affected parties of any disease or infection that may constrain the planned transfer or release of eggs or aquatic animals resulting from Regional/CNO policies or area disease control programs not covered by this policy.

(5) Direct field operations of the Eradication Task Force in situations requiring implementation of the exotic disease eradication plan (713 FW 3).

(6) Meet professional standards equivalent to those of the Fish Health Section of the American Fisheries Society for Fish Health Inspectors or Fish Pathologists.

(7) Annually review current knowledge of aquatic animal pathogens and diseases and recommend to the Aquatic Animal Health Policy Committee any changes to the policy that would improve our ability to eradicate, control, or minimize the impact of aquatic animal diseases and pathogens.

(8) Develop site-specific aquatic animal cultural sanitation and decontamination plans covering the provision of this policy, including the exotic disease eradication plan (713 FW 3).

**D. The Aquatic Animal Health Policy Committee** has overall responsibility for the review and revision of the Aquatic Animal Health Policy (713 FW 1-5), the appropriate sections of 50 CFR (in particular §16.13) and the Handbook of U.S. Fish and Wildlife Service Aquatic Animal Procedures and Protocols. The Committee will meet at least annually

and is comprised of one Service FHC Director from each Region/CNO and the National Fish Health Program Coordinator, Division of the National Fish Hatchery System, Washington Office.

**E. All Service aquatic animal managers will:**

(1) Manage facility operations in compliance with the provisions of this policy.

(2) Coordinate with the Service FHC Director to ensure that gametes, fertilized eggs, and/or aquatic animals (including carcasses) are shipped or accepted (per Exhibit 1, 713 FW 2) in compliance with this policy, area disease control programs, regional stock transfer policies, and/or regulations of other jurisdictions.

(3) Assist in the development, and comply with, site-specific aquatic animal cultural sanitation and decontamination plans covering the provision of this policy, including the exotic disease eradication plan (713 FW 3).

(4) Provide a disease history of the lot of aquatic animals upon request from any Service manager prior to transfer or stocking.

**F. Other Service Aquatic Resource Managers** (e.g., FWO, FRO, NWR, and ES) will:

(1) Ensure that gametes, fertilized eggs, and/or aquatic animals are transferred per Exhibit 1, 713 FW 2, in compliance with this policy, area disease control programs, regional stock transfer policies, and/or regulations of other jurisdictions.

(2) Coordinate with a Service FHC Director to ensure compliance with exotic disease eradication plan (713 FW 3).

**1.7 What are the code of standards by which Service aquatic animal health officials implement the provisions of this chapter?**

**A.** Aquatic animal health officials or their designated Service agent will not issue FWS Form 3-226, unless they have observed the aquatic animals on the facility to detect abnormalities.

(1) Sampling will be conducted to ensure the integrity of sample collection, labeling, and preservation.

(2) The official will not sign FWS Form 3-226 unless all sampling and laboratory work was performed according to procedures set forth or referred to in this policy.

**B.** Service aquatic animal health officials must identify any inspection work performed by non-Service entities on FWS Form 3-226.

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**1.8 What specific actions are required when various types of aquatic animal pathogens are detected?** The following describes the types of pathogens that may be encountered during diagnostic, monitoring and/or inspection work. Actions to be taken, if detected at Federal facilities, are as follows:

**A. Exotic pathogens.** The exotic classification requires an historical absence of the pathogen or disease using adequate detection methods as determined by the FHC Director. Not all exotic pathogens that can adversely impact aquatic animals have been specifically identified. Service fishery managers will develop appropriate control and eradication programs dependent upon identification of specific pathogens requiring such action. When laboratory results indicate an unknown agent or exotic pathogen is present within a population, the Service aquatic animal health officials will immediately notify the Regional Director/CNO Manager (who will then notify the Director) and affected partners. The affected facility will immediately suspend all shipments to and from the facility. In the event Service aquatic animal health officials confirm the presence of an exotic pathogen, follow procedures in 713 FW 3.

**B. Listed pathogens.** In the event a Service FHC Director confirms the presence of a listed pathogen at a Service facility outside the established geographic range, immediate actions will be taken to prevent its spread (paragraph 1.9), including notifying and coordinating with affected Service managers and partners.

**C. Emerging disease or pathogen.** We know that the development of new techniques, along with the culture of new species, may result in the detection of new diseases or pathogens. Upon detection of such an emerging disease or pathogen on a Service facility, the Service aquatic animal health official will immediately contact appropriate Federal, State, and/or tribal authorities, and, if necessary, initiate the organization of an ad hoc committee for the purpose of conducting an emerging disease evaluation action plan. This group will comprise members from the appropriate Fish Health Center and representatives of affected agencies. If Service aquatic animal health officials determine the pathogen to be enzootic, then affected populations may be exempt from destruction, provided that such recommendation leads to effective pathogen containment and minimum risk of spreading the pathogen. The ad hoc committee with concurrence of the Regional Director/CNO Manager, may enforce the eradication plan as defined in 713 FW 3.

**D. Pathogen Eradication Considerations and Strategy.** Total destruction of stocks found to harbor a serious pathogen may not always be the most appropriate action. If the affected stock is a threatened or endangered species, a unique genetic stock, or is otherwise highly valuable, it may be more appropriate for Service aquatic animal health

officials and facility managers to design a plan to eliminate or control the pathogen without depopulating. The plan should consider the biology of the pathogen, the facility's environment, size of the stock population (genetic factors), water supply, and other pertinent factors.

**1.9 How are Service facilities classified and coded following health inspections or monitoring?** A pathogen coding system is an important communications tool used to summarize the results of inspections or regular monitoring of Service facilities and aquatic animal stocks. Designations for stocks and facilities are determined as follows:

**A. Class A.** Service aquatic animal health officials will assign this designation to aquatic animal stocks and facilities that have been inspected and/or subjected to regular monitoring of freshly dead or moribund aquatic animals for the presence of pathogens listed in this policy and none of the listed pathogens have been detected using the methods identified in the Handbook.

**B. Other.** Service facilities with aquatic animals found positive for pathogens listed in Exhibit 2 will be given pathogen designation as per Exhibit 2 codes.

**C. Classification Criteria.**

**(1)** The Service FHC Director may upgrade a facility found positive for a listed pathogen to a suspect classification (which is designated by placing a lower case "s" in front of the pathogen classification code and must be defined in the remarks block of FWS Form 3-226) after the first negative inspection following detection. The facility will remain suspect until another negative inspection has occurred following a minimum 12-month period between inspections. Following the second negative inspection, the Service FHC Director will drop the code of the suspect pathogen from the facility classification.

**(2)** The Service FHC Director will classify facilities that have undergone complete facility depopulation and decontamination as suspect for the prior pathogen(s) code. The Service FHC Director will drop the code of the suspect pathogen(s) upon completion of a minimum of one negative inspection 12 months after repopulation.

**(3)** Pathogen detection following transfer. The Service FHC Director will:

**(a)** Add a suspect designation "s" to the pathogen code for a facility receiving properly disinfected eggs from a shipping station, subsequently having a pathogen detected after the shipping date, only if the pathogen has the potential for being vertically transmitted (see paragraph 1.8B). The FHC Director will drop the code of the suspect pathogen upon completion of a minimum of one negative inspection 12 months after receiving suspect eggs.

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(b) Add a suspect designation "s" to the pathogen code for a facility receiving aquatic animals from a shipping station, subsequently having a pathogen detected after the shipping date. The Service FHC Director will drop the suspect pathogen code upon completion of a minimum of one negative inspection 12 months after receiving suspect aquatic animals.

(4) List the date of the most recent pathogen detection following the pathogen designation codes. For example, if Coleman National Fish Hatchery tested positive for *Yersinia ruckeri* on July 8, 1993, and received eggs on October 9, 1993, from a facility that later tested positive for infectious hematopoietic necrosis virus (IHNV), the pathogen code would be designated as follows:

Coleman NFH: YR 07-08-93  
                  s-IHNV 10-09-93

(5) Assign separate pathogen designation codes for each activity conducted on all Service facilities with broodstock and production programs provided, the broodstock and production aquatic animals are isolated (see isolation definition in Exhibit 1 and the Handbook).

## DEFINITIONS

### AQUATIC ANIMAL HEALTH POLICY

The following terms are defined as used in the Aquatic Animal Health Policy (713 FW 1-5):

- A. Adults.** Sexually mature aquatic animals, regardless of age.
- B. Aquatic animal.** Those species, excluding mammals and birds, their gametes and fertilized eggs managed by or brought onto Service lands, waters, and facilities. Aquatic animals spend some portion of their life within water.
- C. Aquatic animal health official.** A Fish Health Center employee who meets professional standards equivalent to those of the Fish Health Section of the American Fisheries Society for Fish Health Inspectors or Fish Pathologists.
- D. Broodstock facility.** A hatchery or other facility that maintains, onsite, a population of aquatic animals that will be used to provide fertilized eggs, gametes, and fingerlings for use onsite or for shipment to other facilities (also see primary broodstock facility).
- E. Captive broodstock.** Aquatic animals maintained and/or reared in captivity for the production of gametes.
- F. Clinical signs.** Gross pathology, either internal or external signs and/or behavioral changes, associated with disease.
- G. Cooperative agreements.** Any interagency or other multi-party (two or more) aquatic animal health agreement to which the Service is a signatory party.
- H Confirmatory test.** A second and conclusive procedure for the identification of the isolated listed pathogen.
- I. Cultured aquatic animal.** Aquatic animal held or reared in Service and non-Service hatcheries, rearing ponds, research facilities, or net pens.
- J. Diagnostics.** Examinations (targeting moribund animals) to determine disease etiology. The Service aquatic animal health official will note the "Remarks" section of FWS Form 3-226 when diagnostic samples are used as part of an annual health inspection.
- K. Emerging disease or pathogen.** An aquatic animal disease or pathogen not previously known to occur in a given population, but found as a result of newly developed diagnostic techniques or from a species not previously cultured.
- L. Enzootic.** A disease or pathogen that is known to occur within well-defined geographic boundaries.
- M. Epizootic.** A rapid and persistent increase in morbidity and/or mortality (above normal levels) in a given population by a virulent disease agent during a specific time period. The rate and period of persistence has not been specified in this policy because these are population and species-specific.
- N. Exotic disease or pathogen.** An aquatic animal disease or pathogen strain not previously known to occur in a given United States watershed or other jurisdictional boundaries. Requires a historical absence of the pathogen or disease using adequate detection methods as determined by the Fish Health Center Director.
- O. Facility.** Any structure holding aquatic animals and/or gametes, either indoor or outdoor or both.

**P. Fish health management plan.** Must be included in any captive propagation program and will minimally include: the health history of receiving Service facilities, protocols for the quarantine of the subject imperiled species, a set of operational standards or protocols, and the premovement health status of the subject imperiled species.

**Q. Fish health report.** Must be prepared prior to release of a CPP species. It is unlikely that most CCP's will permit the level of lethal sampling and diagnostic test confidence necessary to provide for adequate pathogen certification.

**R. Free-ranging broodstock.** Aquatic animals of any species captured from the wild for the purpose of spawning.

**S. Inspection.** A statistically-based onsite sampling (as per Exhibit 1, 713 FW 2) of all lots of aquatic animals on the facility, performed or supervised by a Service aquatic animal health official, with subsequent examination of the collected tissues and fluids for the detection of listed pathogens in accordance with procedures set forth or referred to in this policy. As outlined in 713 FW 1-5, monitoring and diagnostics results may contribute to inspection sampling requirements. Service aquatic animal health officials will report inspection results on FWS Form 3-226.

**T. Imperiled species.** Species that have been designated as a candidate or are listed under the Endangered Species Act, or are considered of special concern by local, State, or tribal jurisdictions.

**U. Isolation.** Complete containment, as it pertains to an entire facility or a subunit of the facility, of infected or exposed aquatic animals, aquatic animals of unknown disease status, or aquatic animal pathogens. Service fishery managers will accomplish isolation by restricting the movement of such aquatic animals, aquatic animal culture equipment, or other items associated with the infected or exposed aquatic animals or the aquatic animal pathogen.

**V. Listed pathogen.** An aquatic animal pathogen causing or associated with diseases and listed in this policy.

**W. Lot.** A group of cultured aquatic animals of the same species, of the same year class, originating from the same spawning population, and sharing the same water supply.

**X. Monitoring.** Periodic sampling and disease detection work performed or supervised by a Service aquatic animal health official in accordance with procedures set forth or referred to in this policy (713 FW 1-5). When monitoring is used in part or for all of an annual health inspection, a Service aquatic animal health official will document this in the "Remarks" section of FWS Form 3-226.

**Y. Pathogen strain.** A pathogen that differs phenotypically (e.g., host-specificity, virulence, etc.) and genotypically (i.e., unique genetic identity) from other pathogens of the same taxonomic group.

**Z. Prevalence.** The number of detectable cases of a disease or disease agent (i.e., pathogen) present in a population at a given time.

**AA. Primary broodstock facility.** A hatchery or other facility whose primary role is to maintain, onsite, resident populations of aquatic animals that will be used to provide fertilized eggs and gametes for the National Broodstock Program. Primary broodstock facilities as of September 2001 are: Ennis, Erwin, Saratoga, and White Sulphur Springs National Fish Hatcheries.

**BB. Quarantine.** Used in 713 FW 3 to describe the cessation of all movements of animal and potential infectious material from a facility suspected of containing an exotic disease. The facility boundaries define the outer limits of the quarantine zone. Quarantine is also used in 713 FW 5 to describe the highest level of isolation rearing where an animal or group of animals is held in a closed environment with disinfected effluent to ensure that disease organisms are not introduced to the general population of the facility or to the watershed.

**CC. Regulations.** Foreign, Federal, State, or tribal aquatic animal disease control regulations or administrative orders promulgated to prevent the introduction or spread of aquatic animal diseases or for other purposes.

**DD. Service-managed properties.** Any land, water and facilities controlled by the Service. These properties include, but are not limited to: national fish hatcheries, fish technology centers, fish health centers, and national wildlife refuges.

**EE. Service-contracted facilities.** Any non-Service facility under contract to the Service to produce aquatic animals.

**FF. Special-case aquatic animals.** Includes, but is not limited to: threatened and endangered species, species of concern, native fish species, animals for which there are no commonly accepted diagnostic techniques, and low captive population sizes (< 100 animals).

**GG. Statistically-based sampling.** The collection by a Service aquatic animal health official or his/her designated Service agent of appropriate aquatic animal tissue or fluid samples, on a lot-specific basis, in sufficient numbers to meet sampling criteria for listed pathogens as required in this policy.

**HH. Stock.** That portion of an aquatic animal population sharing a common gene pool and, for aquatic animal health purposes, a common environment.

**II. Surveillance.** The health examination (e.g. inspections, monitoring, diagnostics and non-lethal techniques) of aquatic animals by Service aquatic animal health officials.

**JJ. Traditional aquaculture species.** Animals that have been successfully reared in captivity and for which diagnostic techniques are available to test for their diseases.

**KK. Watershed.** A drainage system of connected lakes and/or streams confined to a limited geographic basin.



FACILITY/PATHOGEN CODING SYSTEM

Pathogens with Potential to be Vertically Transmitted		Pathogens <u>Not</u> Transmitted Vertically if Properly Disinfected	
Pathogen	Code	Pathogen	Code
Infectious Hematopoietic Necrosis virus	IHNV	<i>Aeromonas salmonicida</i> Furunculosis	AS
Infectious Pancreatic Necrosis virus	IPNV	<i>Yersinia ruckeri</i> enteric redmouth	YR
Viral Hemorrhagic Septicemia virus	VHSV	<i>Myxobolus cerebralis</i> whirling disease	MC
Largemouth Bass virus	LMBV		
<i>Edwardsiella ictaluri</i> enteric septicemia of catfish	EI		
<i>Renibacterium salmoninarum</i> bacterial kidney disease	RS		